

# Evaluating CCRC Solvency

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Atlanta, GA

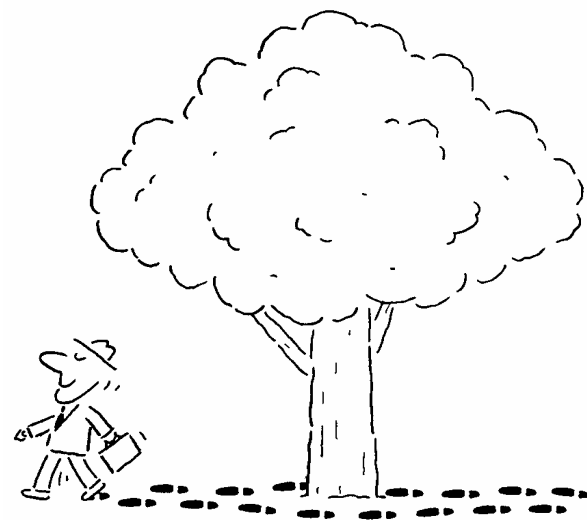
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*Helping you solve your  
management challenges*

# Overview



- ◆ Defining solvency
- ◆ Methods of measuring solvency
- ◆ Case examples
- ◆ How do we use this information?

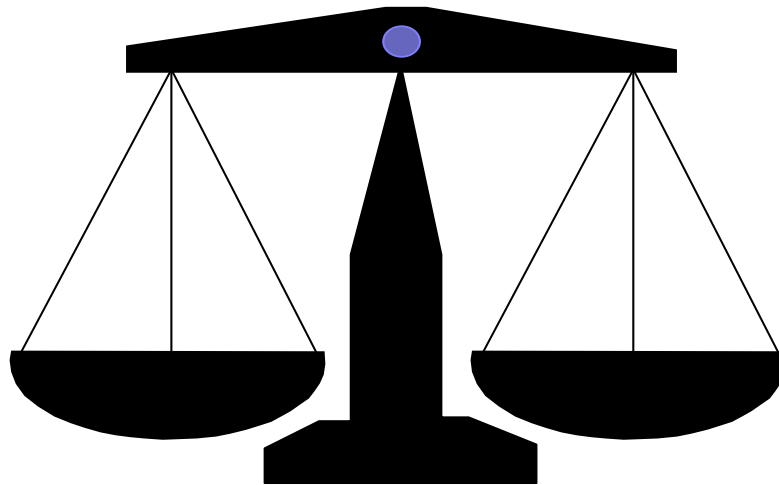
# How Do You Determine Solvency?



- ◆ What is the definition of solvency?
- ◆ Stakeholders opinions
  - Board and management
  - Residents
  - Regulators
  - Financing institutions

# General Definition of Solvency

- ◆ Do the assets of your organization equal or exceed your liabilities?



# Hierarchy of Solvency Criteria

- ◆ Level One (Residents)
  - Cash inflows projected to exceed cash outflows
  - No technical defaults of loan covenants
- ◆ Level Two (Regulators and Financing Institutions)
  - Projected accumulation of significant reserves
  - DSR and Cash-to-debt ratios exceed targets
- ◆ Level Three (Board and Management)
  - Meets criteria for satisfactory actuarial balance

# Potential Measures of Solvency



- ◆ State CCRC statutes (regulation)
- ◆ Bond covenants
- ◆ A pre-defined set of ratio criteria (targets)
- ◆ Feasibility studies prepared in accordance with GAAP

# Solvency Measures in Regulation

- ◆ No federal or national standards
- ◆ Four regulatory categories
  - Primarily disclosure or filing (19 states)
  - Minimum assets accruals (9 states)
  - Alternative reserve valuation (2 states)
  - Actuarial reserve valuation (5 states)



# Solvency Measures in Bond Covenants

- ◆ Minimum debt service coverage requirements
- ◆ Possible cash-to-debt thresholds
- ◆ Concerned only with ability to repay bonds, not obligations to residents

# Solvency Measures using Ratio Analysis

- ◆ Is there a “magic set” (high statistical correlation) of ratio that would indicate that a CCRC is solvent?
- ◆ If so, how does it vary and what are criteria for:
  - Mix of contract types
  - Age of facility
  - Unit configuration

# Solvency Measures from Feasibility Study

- ◆ Five-year financial projection is too short to uncover long-term pricing problems
- ◆ Expectation that \$0 GAAP future service obligation means that all liabilities are fully funded
- ◆ Which measure indicates net worth? FSO or Net Assets

# ASOP No. 3 Conditions for Satisfactory Actuarial Balance

- ◆ Developed by American Academy of Actuaries Committee on CCRCs
- ◆ Adopted by Actuarial Standard Board, July 1994
- ◆ Defines three criteria to be tested by:
  - Condition 1—Actuarial balance sheet
  - Condition 2—Cohort pricing analysis
  - Condition 3—Cash flow projection

# Condition 1: Funded Status @ 100%

- ◆ Are the resources available for current residents greater than or equal to the actuarial present value of the expected costs of meeting all remaining obligations to such residents under their contracts, with appropriate provision for surplus?
- ◆ Laymen's terms—do the reserves held by the organization, which include liquid assets and PP&E, cover the shortfall between future costs and fees

# Condition 2: New Entrant Pricing Surplus @ 0%

- ◆ Does the sum of entry fees paid plus the actuarial present value of monthly fees equal or exceed the actuarial present value at occupancy of the costs for meeting all obligations for a typical cohort of new entrants, with appropriate provision for surplus?
- ◆ Laymen's terms—will the combination of future monthly fees and entry fees cover the expected future costs of care and entry fee refunds for a group a new residents

# Condition 3: Projected Cash Balances @ \$0

- ◆ Are positive cash balances projected with respect to current and future residents for a period of at least twenty years?
- ◆ Laymen's terms—is the facility projected to generate sufficient cash to pay its expenses?

# Why Use the Actuarial Conditions?



- ◆ Consistent
- ◆ Comprehensive
- ◆ Robust in handling facility uniqueness (variations)
- ◆ Procedural and applicable in real life
- ◆ 20 year history of meaningful use

# How Do You Determine Your Actuarial Position?

## ◆ Collect and analyze data

- Resident demographics

- Resident movements

- Operating and capital budgets and history

## ◆ Project future population flows

## ◆ Generate financial projections

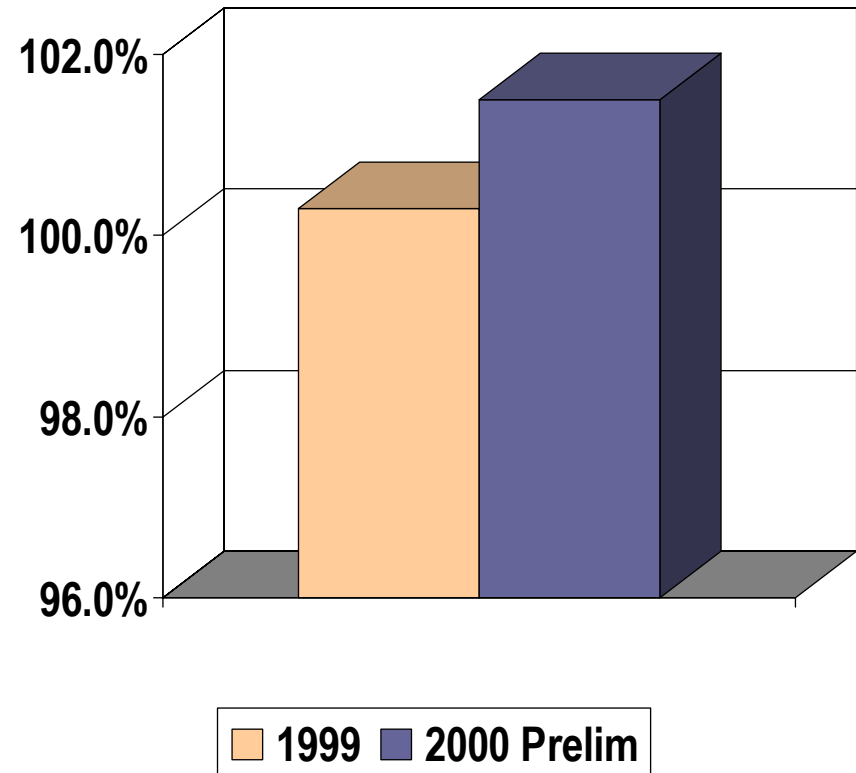
Population flows  $\leftrightarrow$  Financial assumptions

# How Do You Determine Your Actuarial Position? (continued)

- ◆ Evaluate financial projections
- ◆ Test sensitivity to alternative assumptions
  - Changes in economic assumptions
  - New entrant contract selection
  - Changes in health care utilization
- ◆ Discuss results and develop pricing policies

# Empirical Data on Condition 1 Funded Status

- ◆ Median is fully funded
- ◆ Recommended surplus depends on age of facility, mix of continuing care contracts and their risks
- ◆ AVP standards are:  
5 to 10% surplus



# Do Reserves and Fees for Current Residents Cover their Costs?

<b>Monthly Fees</b>	<b>\$ 77.1 million</b>
<b>Actuarial Reserves</b>	<b>30.8 million</b>
<b>Ind. Living Costs</b>	<b>60.5 million</b>
<b>Assisted Living Costs</b>	<b>21.0 million</b>
<b>Nursing Costs</b>	<b>26.6 million</b>
<b>Refund Liabilities</b>	<b><u>0.6 million</u></b>
<b>Actuarial Deficit</b>	<b>(\$ 0.8 million)</b>

# Calculation of Funded Status?

**100% +**

**Actuarial Deficit**

**(\$ 0.8 million)**

**Divided by**

**Total Actuarial Liabilities**

**108.1 million**

**+ Refund Liability**

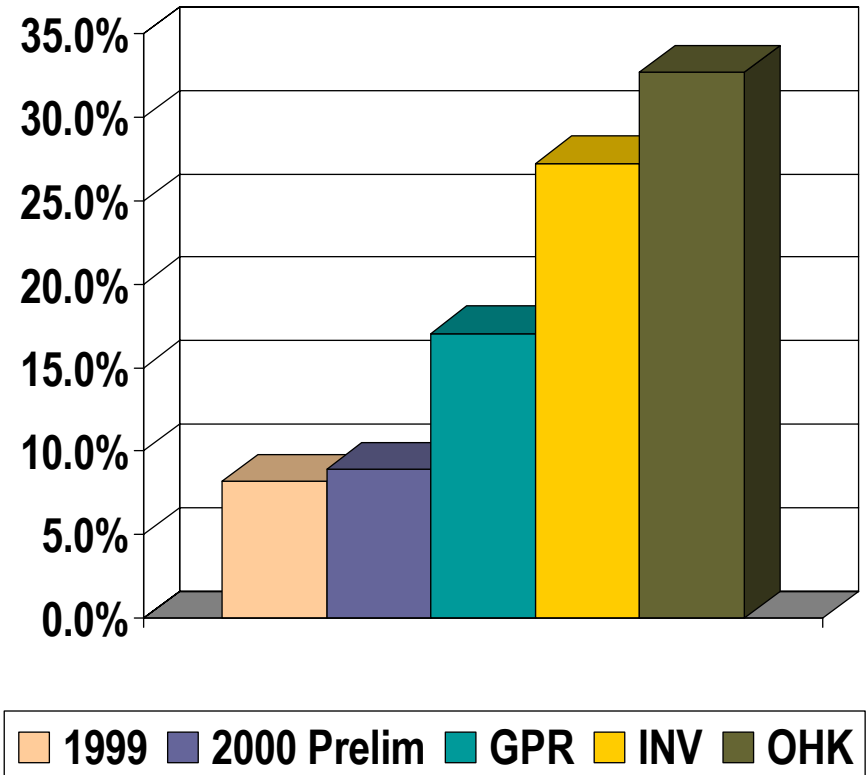
**0.7 million**

**= Funded Status**

**99.3%**

# Empirical Data on Condition 2 New Entrant Pricing Surplus

- ◆ Median is nearly 9%
- ◆ Recommended surplus depends on size of facility, type of continuing care contract and its risk
- ◆ AVP standards are: 10 to 15% surplus



# Do Entry and Monthly Fees for New Entrants Cover their Costs?

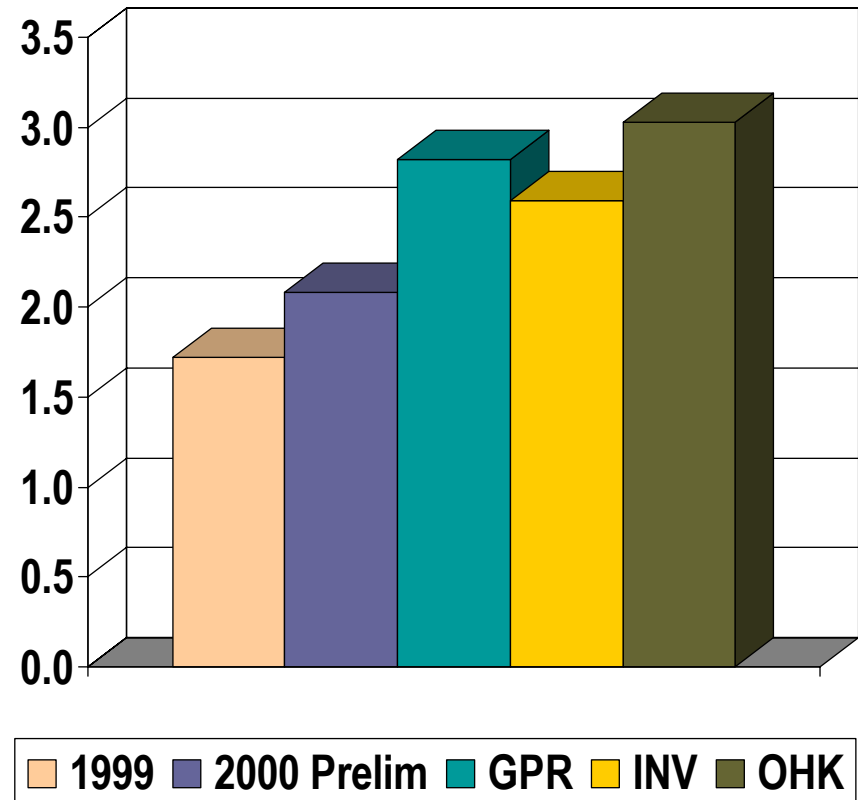
<b>Entry Fee</b>	<b>\$ 133,602</b>
<b>- Expected Refunds</b>	<b>( 3,699)</b>
<b>Future Monthly Fees</b>	<b>382,943</b>
<b>- Cohort Liabilities</b>	<b><u>505,590</u></b>
<b>Actuarial Surplus</b>	<b>\$ 7,256</b>

# Calculation of New Entrant Surplus(Deficit)?

<b>Actuarial Surplus</b>	<b>\$ 7,256</b>
<b>Divided by</b>	
<b>Total Cohort Liabilities</b>	<b>505,590</b>
<b>+ Refund Liability</b>	<b>3,699</b>
<b>= Actuarial Surplus</b>	<b>1.4%</b>

# Empirical Data on Condition 3 Projected Cash Balances

- ◆ Median is increasing cash balances
- ◆ Recommended position is for reserves to at least match increases in expenses since liabilities will approximately increase the same
- ◆ AVP standards are:  
1.48 to 1.79 (10 year growth)



# Calculation of 10-Year Projected Reserves

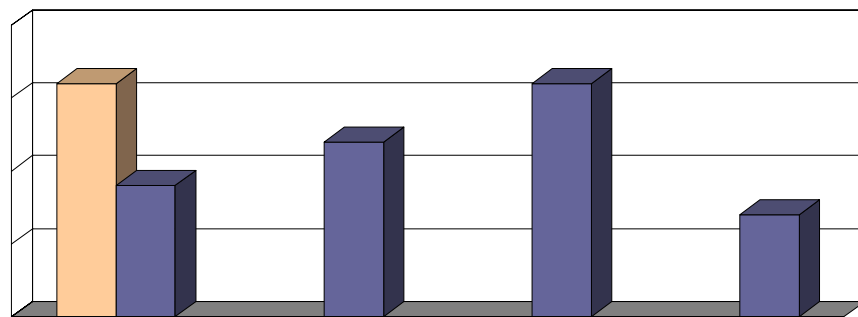
<b>Projected Liquid Reserve Balance</b>	<b>\$ 31,472,000</b>
<b>Divided by</b>	
<b>Initial Liquid Reserve Balance</b>	<b>\$ 14,050,000</b>
<b>= 10-Year Reserve Change Factor</b>	<b>2.24x</b>

# Issues that Relate to Actuarial Opinion

- ◆ Consultant must apply experience and judgment in reviewing results to formulate an opinion
- ◆ A CCRC can be considered in “satisfactory actuarial balance” even if one criteria isn’t met initially using baseline assumptions
- ◆ Many solutions may exist if a CCRC doesn’t meet one or more of the criteria

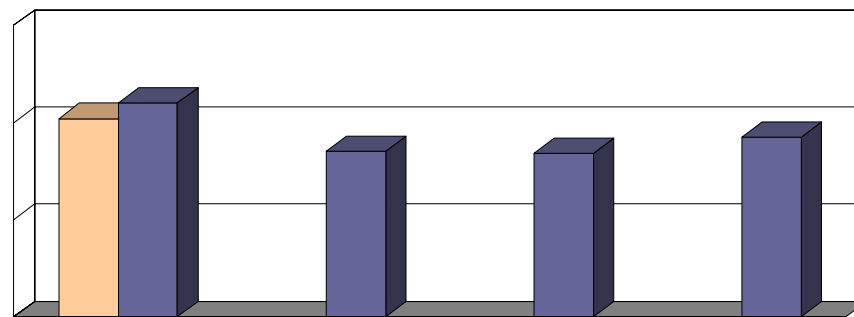
# Sample Financial Assumptions

## ILU Occupancy



	Median	GPR	INV	OHK
1999	95.6			
2000*	94.9	95.2	95.6	94.7

## ILU Per Capita Costs (2000\$s)

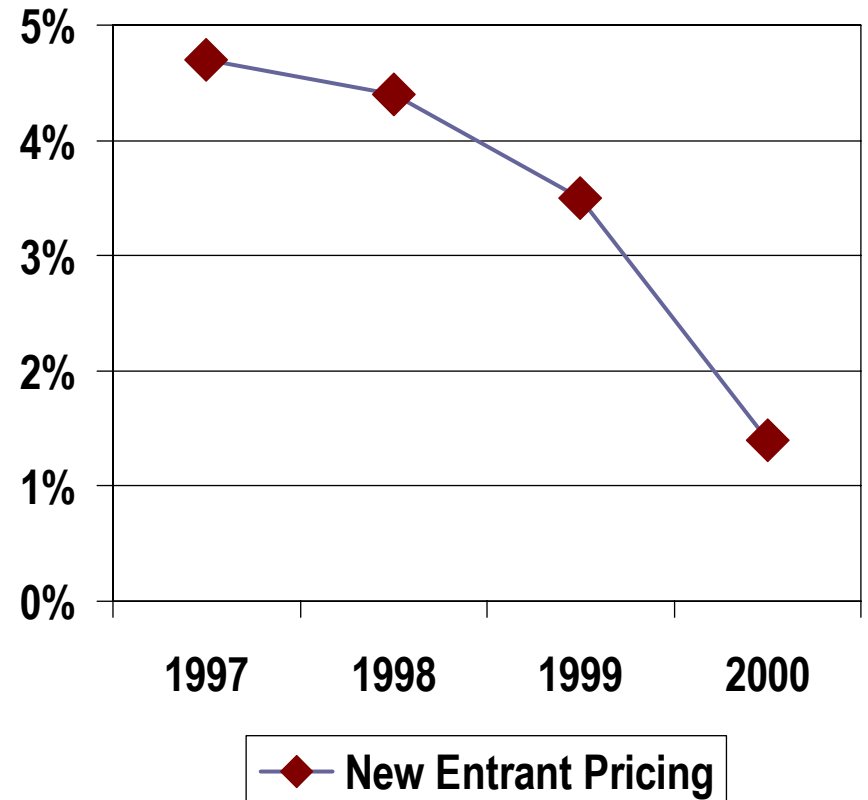
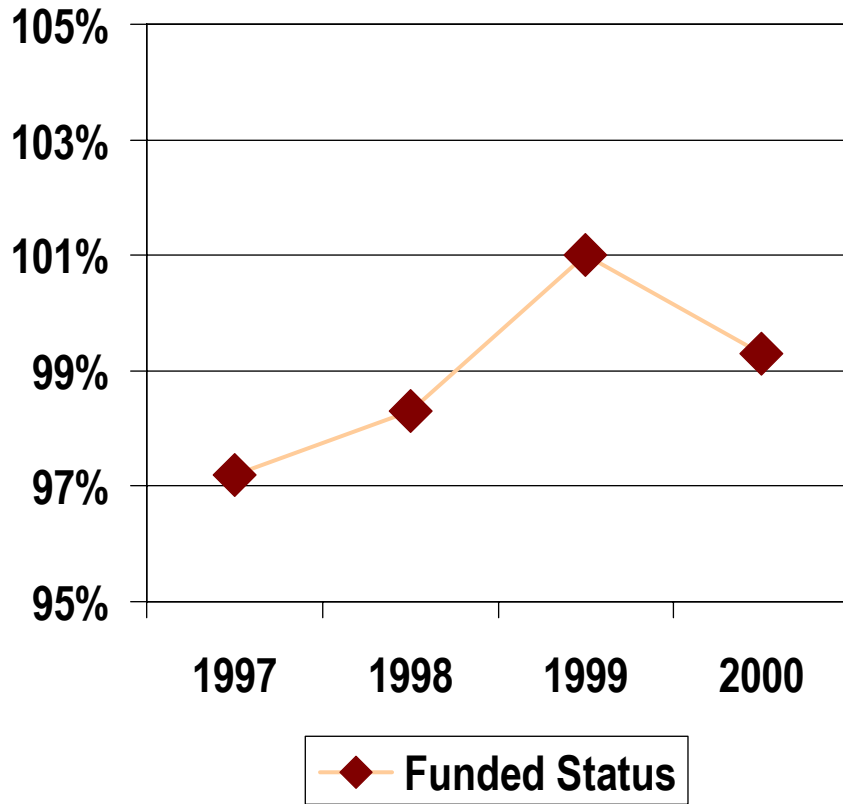


	Median	GRP	INV	OHK
1999	\$40.80			
2000*	\$43.95	\$34.01	\$33.62	\$36.94

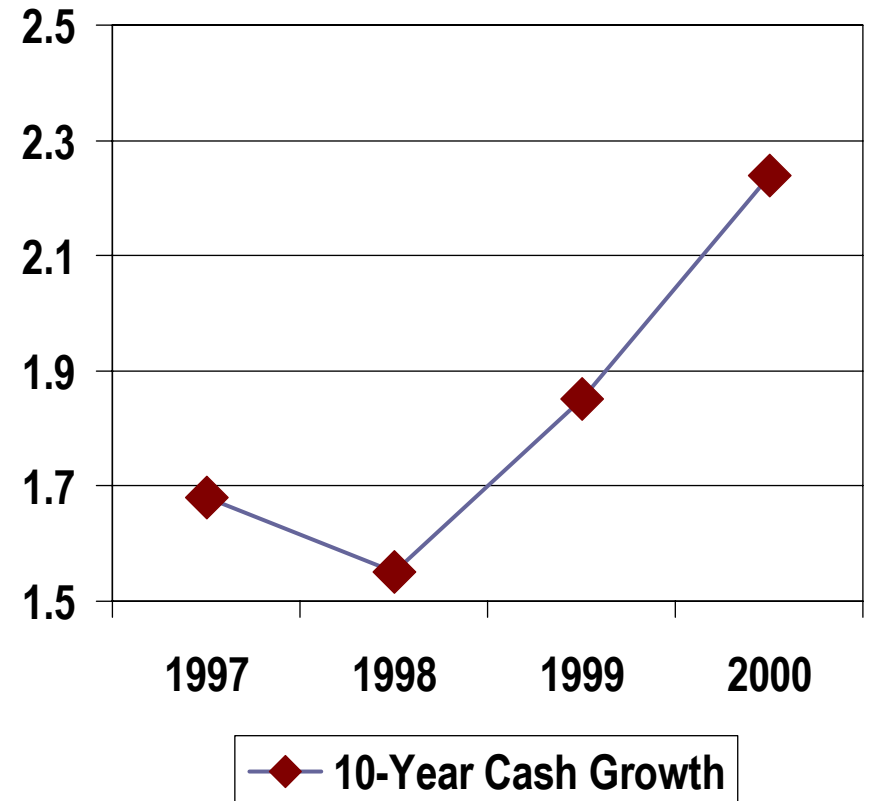
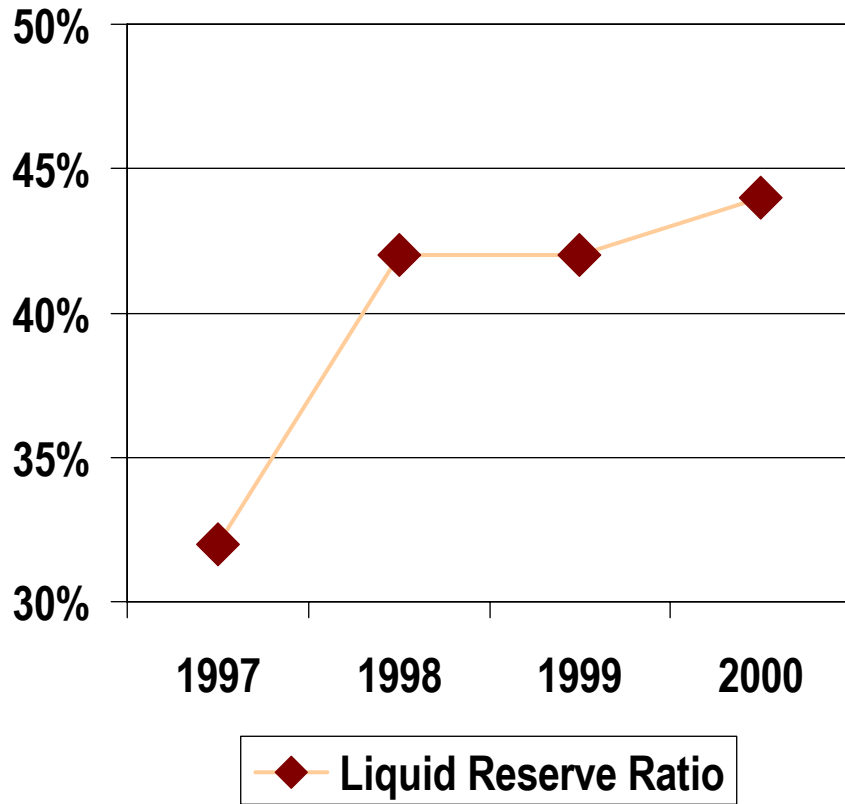
# Case Example A

- ◆ Funded status: 99.3%
- ◆ New entrant surplus: 1.4%
- ◆ Projected cash balances: 2.24x
- ◆ \$32 million in debt with expansion financing
- ◆ Are they in “satisfactory actuarial balance”?  
YES, barely

# Actuarial Study Trends



# Actuarial Study Trends

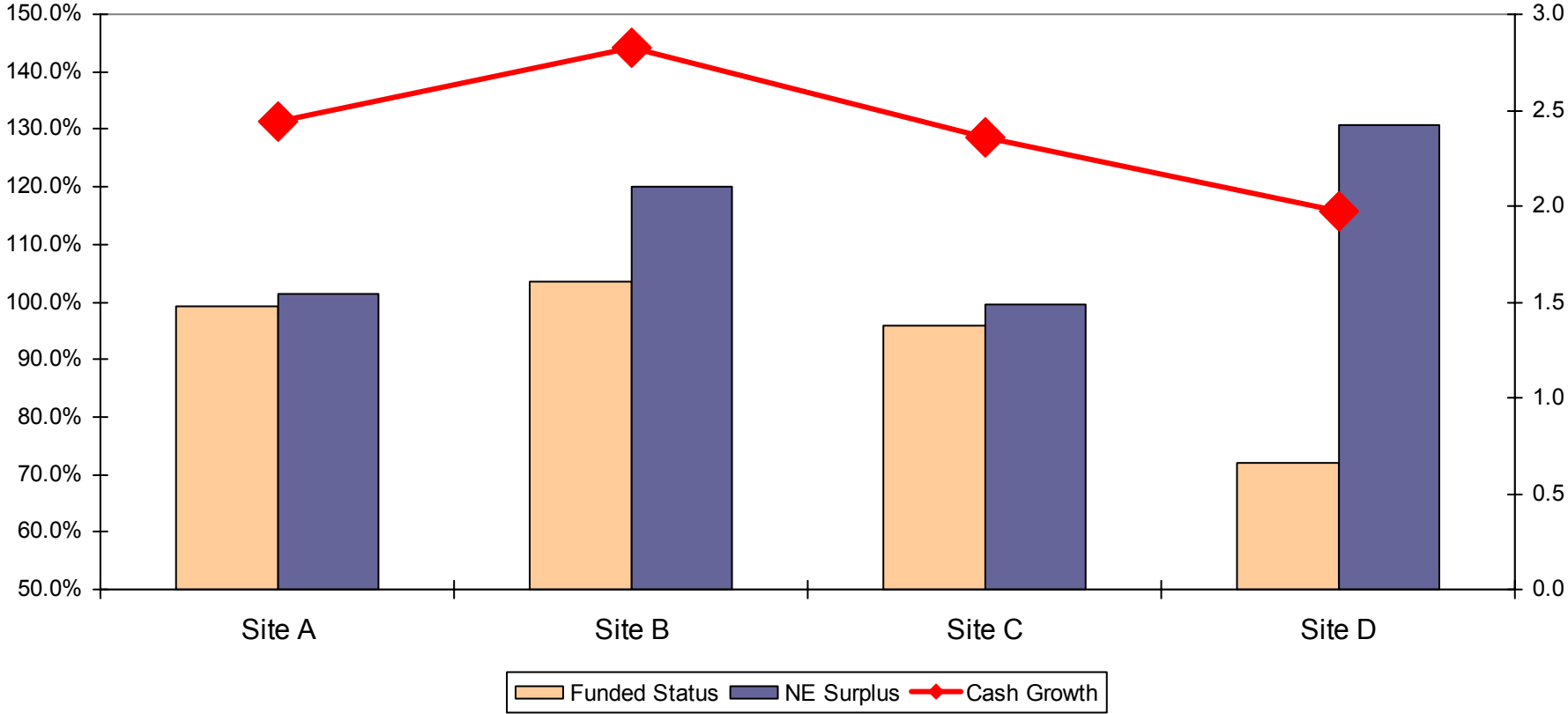


# Actuarial Report Card

	<u>Result</u>	<u>Quartile</u>	<u>Grade</u>
<b>Actuarial Funded Status</b>	<b>99.3%</b>	<b>Second</b>	<b>B+</b>
<b>New Entrant Pricing</b>	<b>1.4%</b>	<b>First</b>	<b>B</b>
<b>Projected Cash Accumulation</b>	<b>2.44x</b>	<b>Third</b>	<b>A</b>
<b>Health Care Capacity</b>	<b>Sufficient for Expected Utilization</b>		<b>A-</b>

**Remember: Future fee increases must cover internal expense inflation or funded status may decline**

# Other Case Examples



# Case Example B

- ◆ Funded status: 103.6%
- ◆ New entrant surplus: 20.1%
- ◆ Projected cash balances: 2.83
- ◆ \$26 million in debt
- ◆ Are they in “satisfactory actuarial balance”? YES
- ◆ Have capability for lower rates of future fee increases or expansion in non-revenue generating areas

# Case Example C

- ◆ Funded status: 95.9%
- ◆ New entrant surplus: (0.6%)
- ◆ Projected cash balances: 2.36x
- ◆ \$20 million in debt
- ◆ Are they in “satisfactory actuarial balance”? NO
- ◆ Increase monthly fees by 6.5% immediately, or by 1.3% over internal inflation for remaining lifetimes

# Case Example D

- ◆ Funded status: 71.9%
- ◆ New entrant surplus: 30.6%  
(\$84,000 per 28 annual turnover)
- ◆ Projected cash balances: 1.97x
- ◆ Are they in “satisfactory actuarial balance”? MAYBE
- ◆ New entrants generate \$2.4 million surplus annually;  
project that they will show fully funded in 12 years

# How Does Management Implement a Plan for Maintaining Actuarial Balance?

- ◆ Board should adopt policies on ranges in acceptable actuarial results from year-to-year
- ◆ For a 100% lifecare facility, set target:
  - Funded status of 103 to 105 percent
  - New entrant cohort surplus of 8 to 12 percent
  - 10-year cash projection increase of 1.70
- ◆ Targets will vary according to many factors
- ◆ Adjust fees at budget time to maintain these targets

# Summary



- ◆ Estimating the GAAP FSO is of minimal use
- ◆ Trending GAAP FSO has marginal value
- ◆ There is no known set of ratio criteria that ensures and validates solvency
- ◆ Methods to achieve satisfactory actuarial balance have become the de facto standard for prudent stewardship

# **APPENDIX: AVP 2000 COMPARATIVE STATISTICS**



# OVERVIEW



- ◆ Description and purpose of database
- ◆ Definition of actuarial report card
- ◆ 1999 and preliminary 2000 statistics

# Description and Purpose of Database

- ◆ Objective was to share the distribution of results from clients that we review regularly
- ◆ It's our opinion that these clients represent the best of CCRCs, in terms of financial condition
- ◆ Annual updates for limited number of statistics
  - 76 sites in 1999 results
  - 61 sites (# of responses vary) in preliminary 2000\* results

# Development of Actuarial Report Card

- ◆ The actuarial report card has been used in to summarize the results of the actuarial study
  - Actuarial valuation
  - New entrant pricing analysis
  - Projected cash flows
  - Adequacy of health care beds
- ◆ Use of comparative results database allows us to more objectively assign grades

# Comparative Database Grading System: Satisfactory Actuarial Balance

- ◆ Based on where a client's results falls in data, a consistent grade would be assigned
  - First quartile (0 to 25<sup>th</sup> percentile)—up to B
  - Second quartile (25<sup>th</sup> to 50<sup>th</sup> percentile)—B to A-
  - Third quartile (50<sup>th</sup> to 75<sup>th</sup> percentile)—A- to A
  - Fourth quartile(75<sup>th</sup> to 100<sup>th</sup> percentile)—A to A+
- ◆ CCRCs should target grades of A or higher in all three conditions for satisfactory actuarial balance

# Comparative Database Grading System: Evaluating Health Care Adequacy

- ◆ Appropriate to consider total combined health care needs as opposed to assisted living or nursing or dementia separately due to modeling credibility
- ◆ Compare capacity to expected utilization and potential variation in annual needs; grading criteria
  - Capacity < Expected — up to B
  - Expected < Capacity < 90<sup>th</sup> percentile — B to A-
  - Expected < 90<sup>th</sup> percentile < Capacity — A- to A+

# Comparative Statistics from the AVP Database



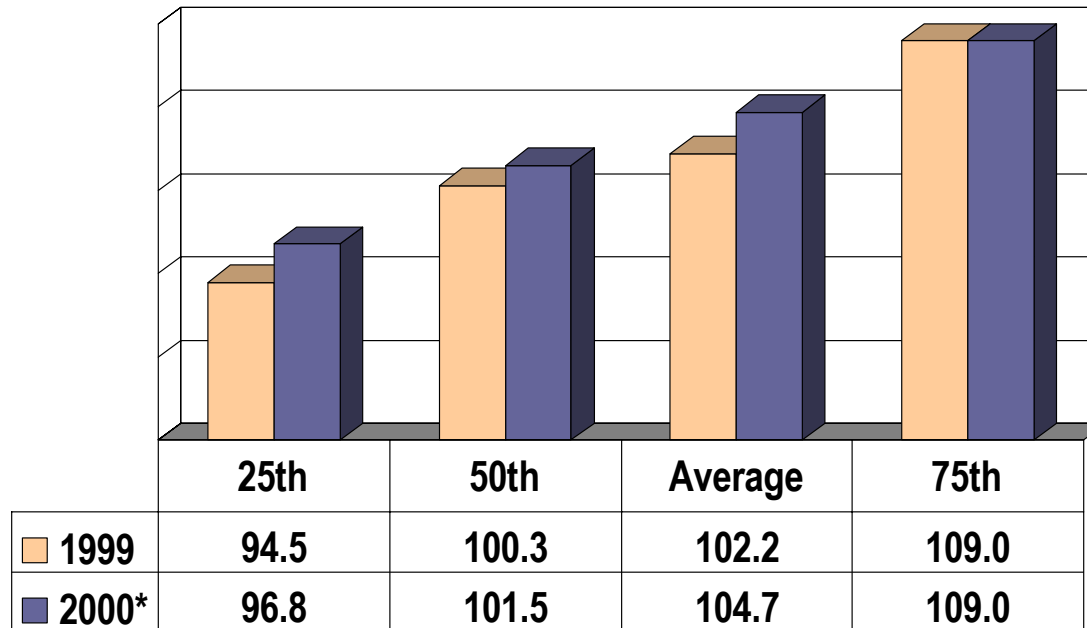
- ◆ Actuarial
- ◆ Demographic
- ◆ Financial

# Actuarial Statistics

- ◆ Funded Status
- ◆ New Entrant Pricing
- ◆ 10-Year Reserve Increase Factor
- ◆ Liquid Reserve Ratio
- ◆ Actuarial Ratio
- ◆ Actuarial Return on Fixed Assets

# Funded Status (Table 4.1)

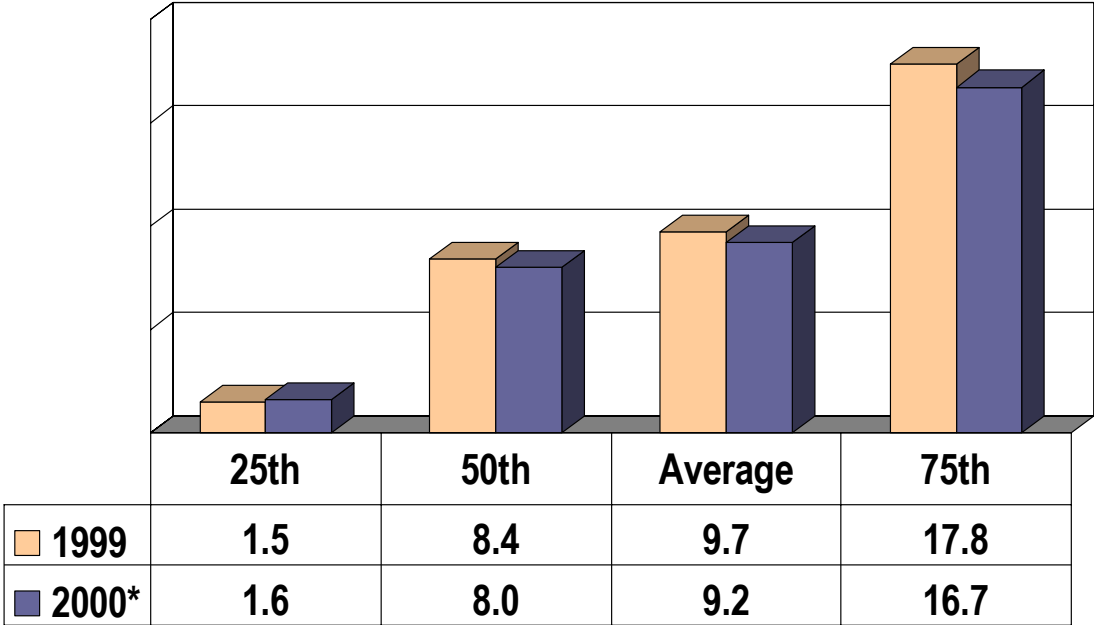
Measures extent to which future costs associated with current residents are met by current reserves and future revenues.



Percentages

# Single New Entrant Pricing (Table 5.1)

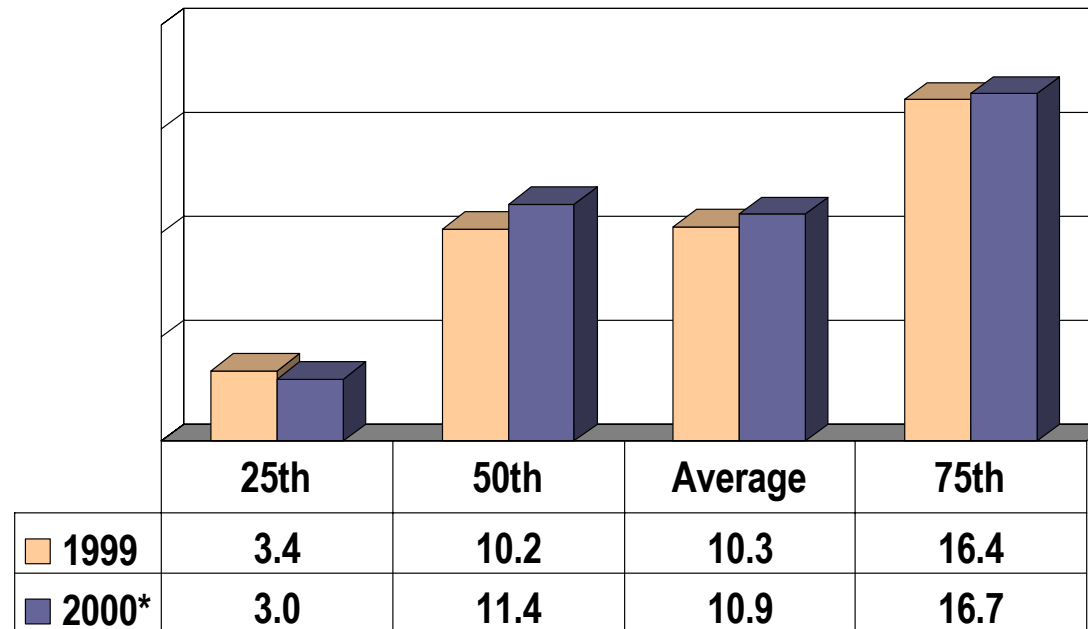
Measures the degree to which fees charged to new entrants are expected to cover the cost of contractual obligations.



Percentages

# Couple New Entrant Pricing (Table 5.1)

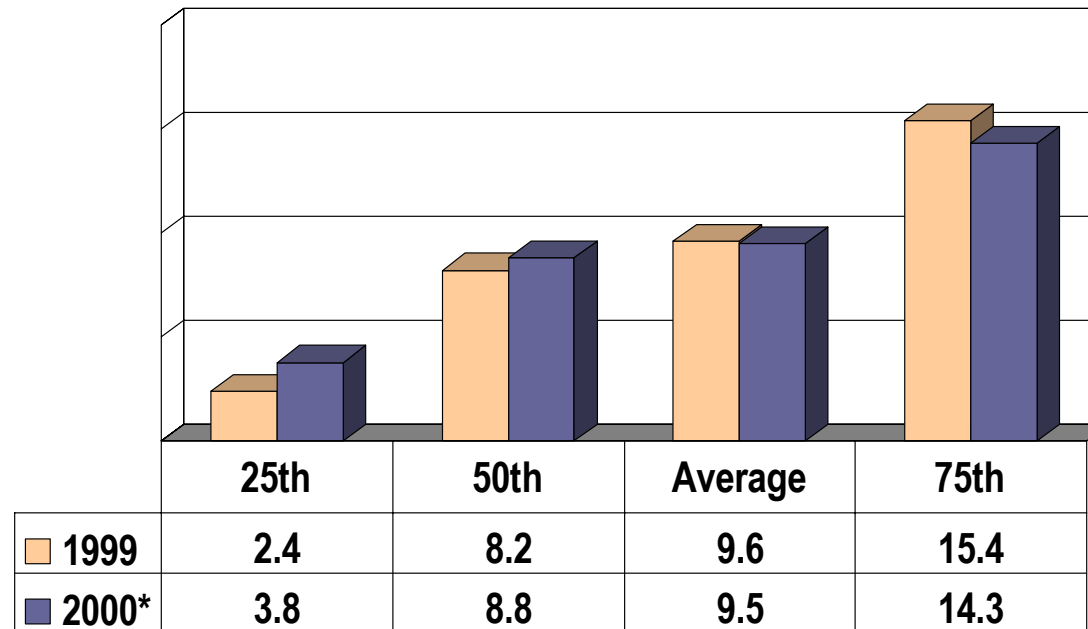
Measures the degree to which fees charged to new entrants are expected to cover the cost of contractual obligations.



Percentages

# Typical New Entrant Pricing (Table 5.1)

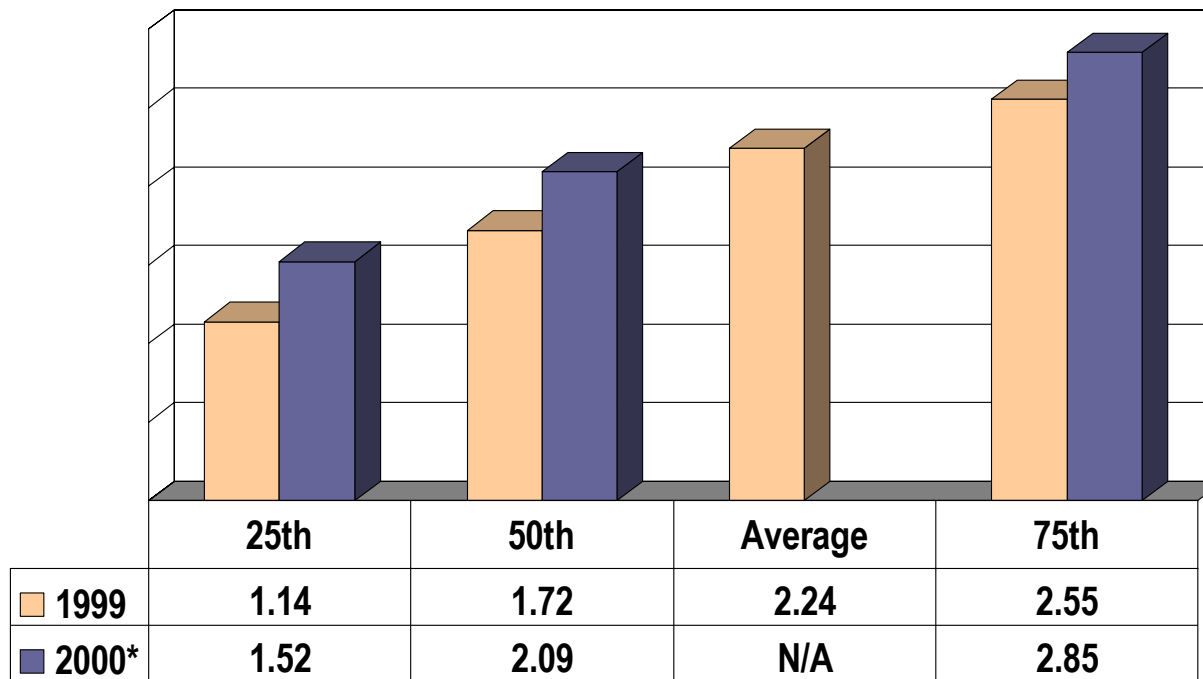
Measures the degree to which fees charged to new entrants are expected to cover the cost of contractual obligations.



Percentages

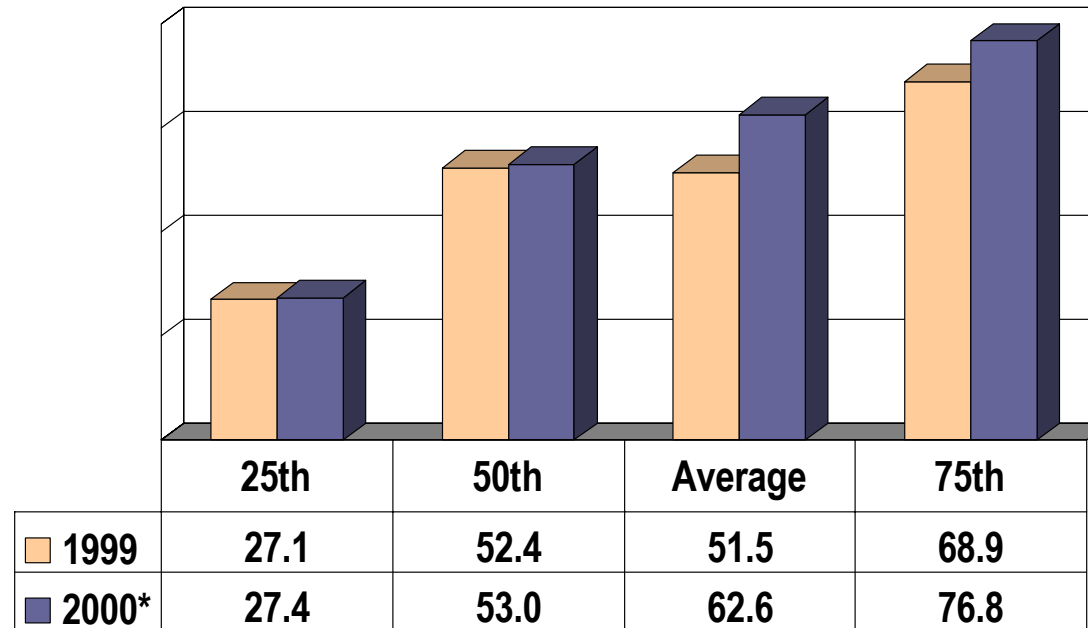
# 10-Year Reserve Increase Factor

Represents the expected growth in liquid reserves.



# Liquid Reserve Ratio

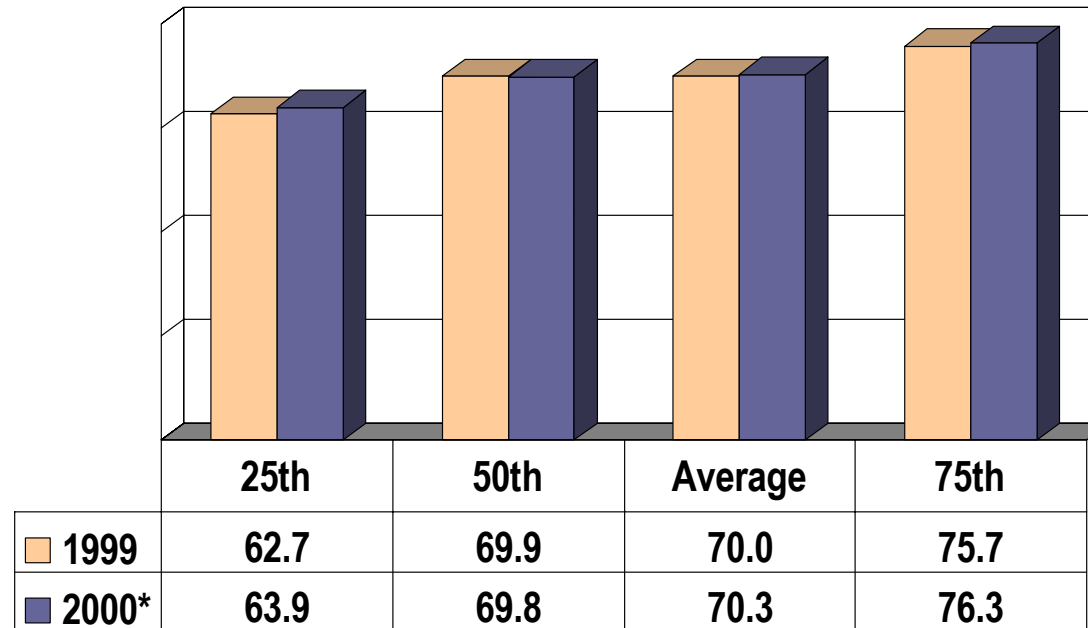
Measures the degree to which actuarial liabilities are met by liquid assets.



Percentages

# Actuarial Ratio

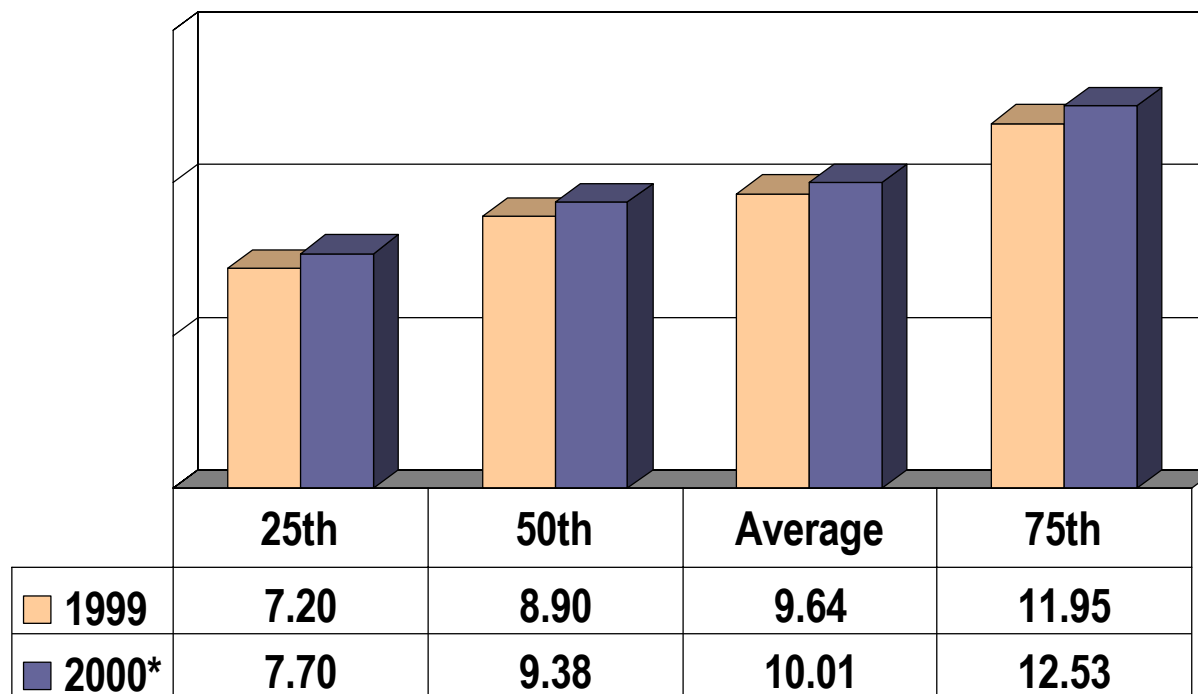
Represents the portion of future expenses covered by revenues that can be adjusted in the future.



Percentages

# Actuarial Return on Fixed Assets

A measure of the internal rate of return on investment in fixed assets.



Percentages

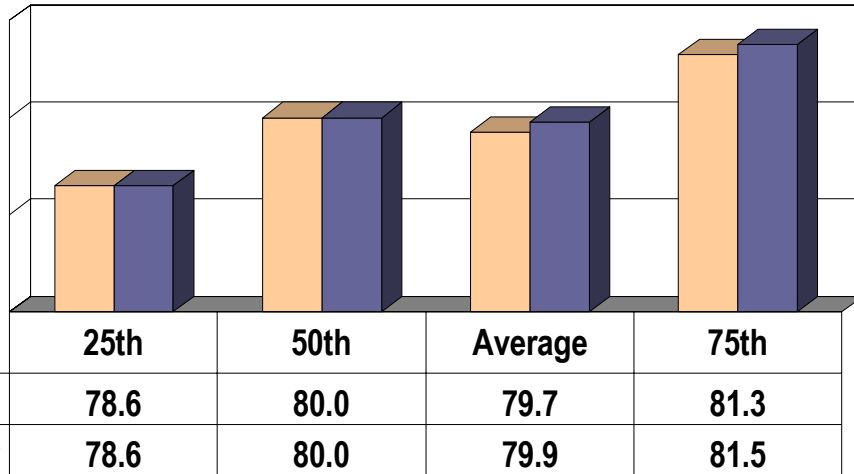
# Demographic Statistics



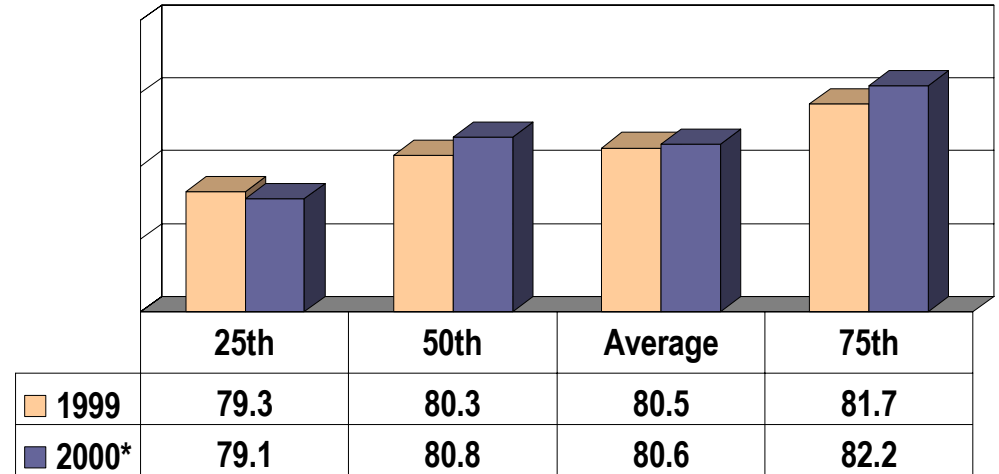
- ◆ Average Age at Entry
- ◆ Average Attained Age
- ◆ Life Expectancy
- ◆ Health Care Ratio

# Average Entry Age

Female

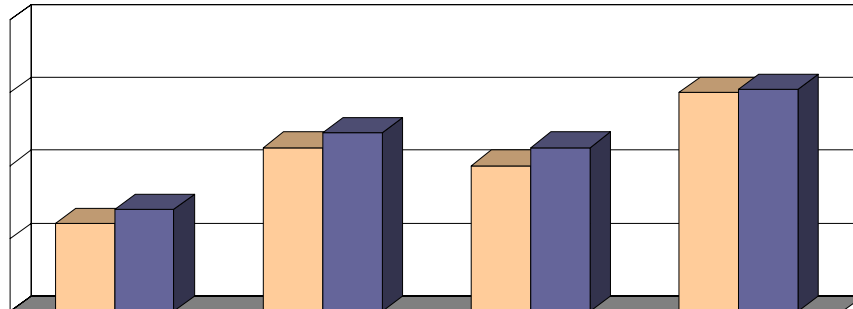


Male



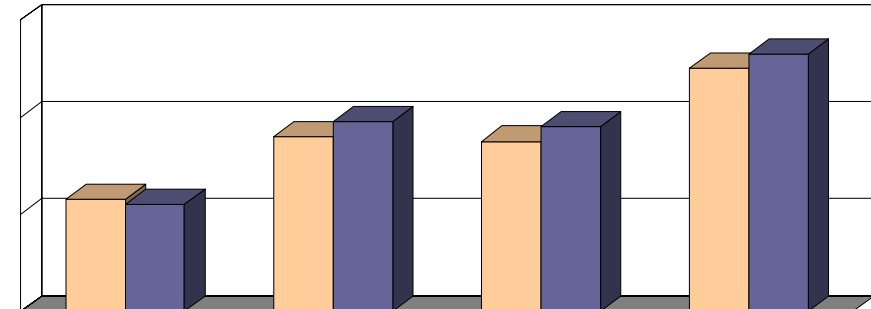
# Average Attained Age

Female



	25th	50th	Average	75th
1999	82.4	84.5	84.0	86.0
2000*	82.8	84.9	84.5	86.1

Male

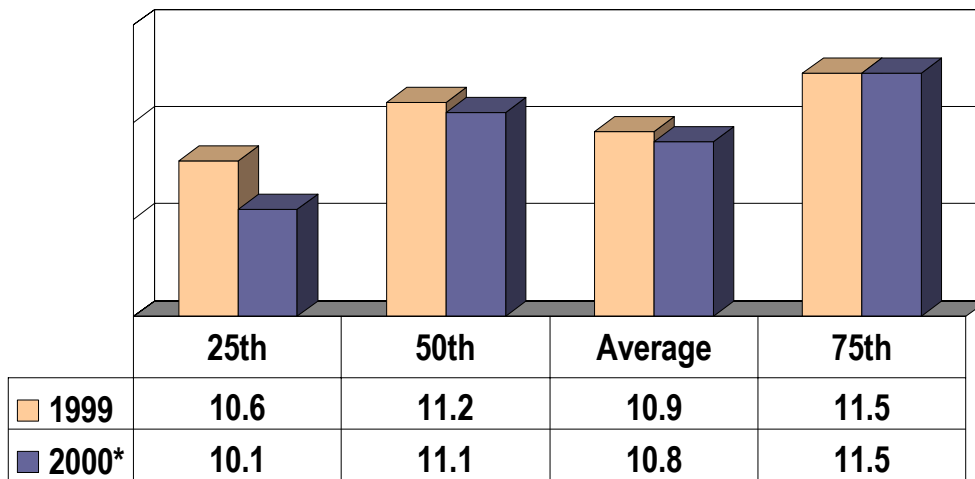


	25th	50th	Average	75th
1999	82.3	83.6	83.5	85.0
2000*	82.2	83.9	83.8	85.3

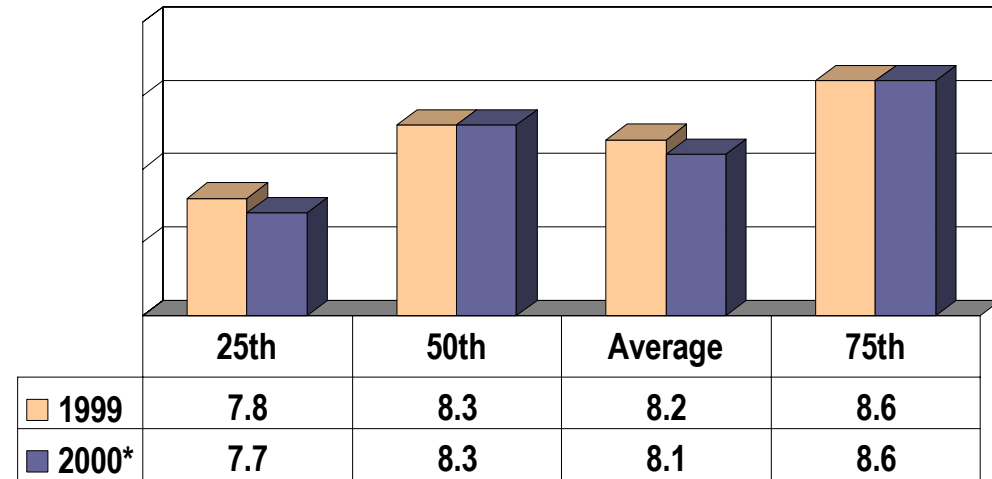
# Age-80 Life Expectancy

Total remaining life expectancy for an 80-year-old resident.

Female

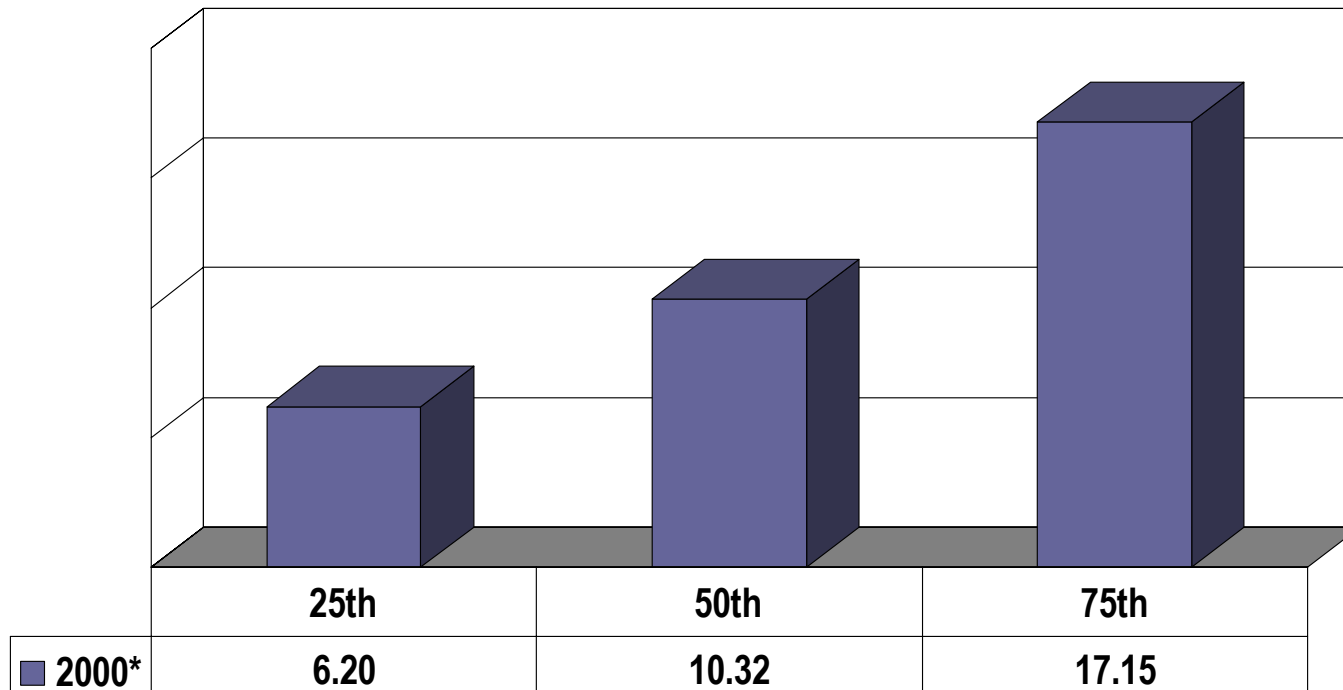


Male



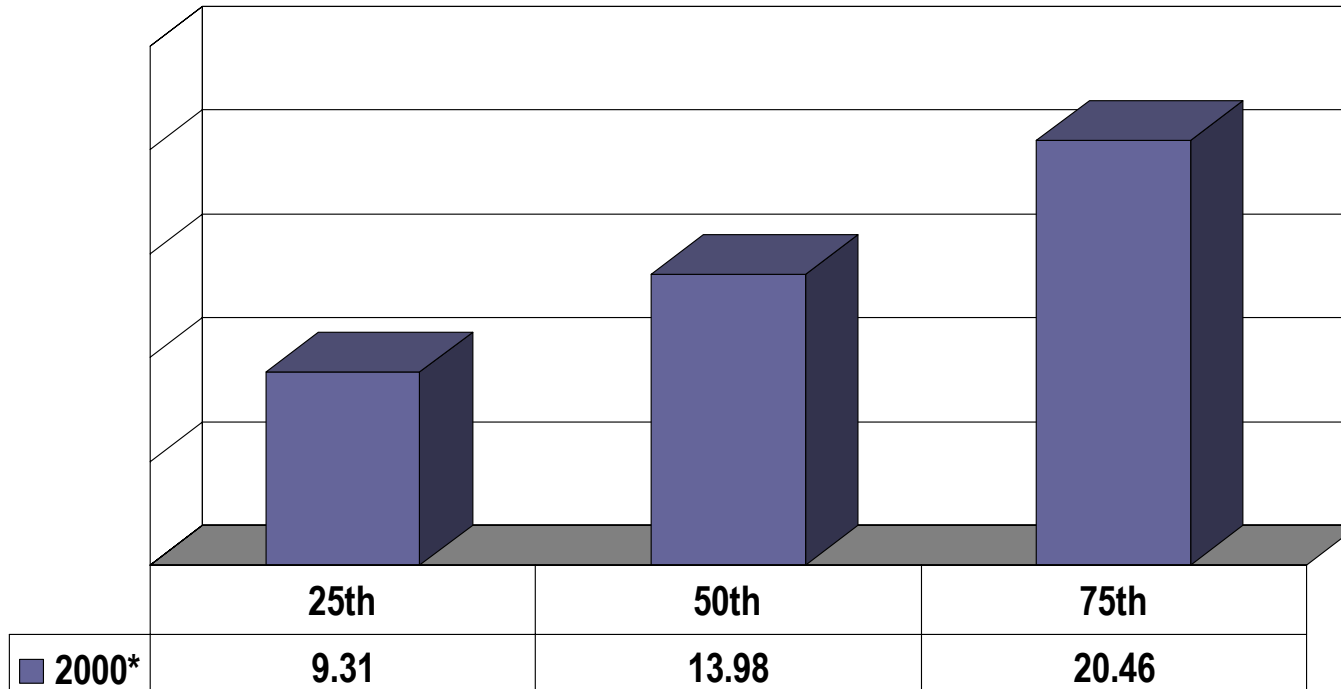
# Number of ALU Residents per 100 ILU Residents

Measures assisted living utilization by contractholders.



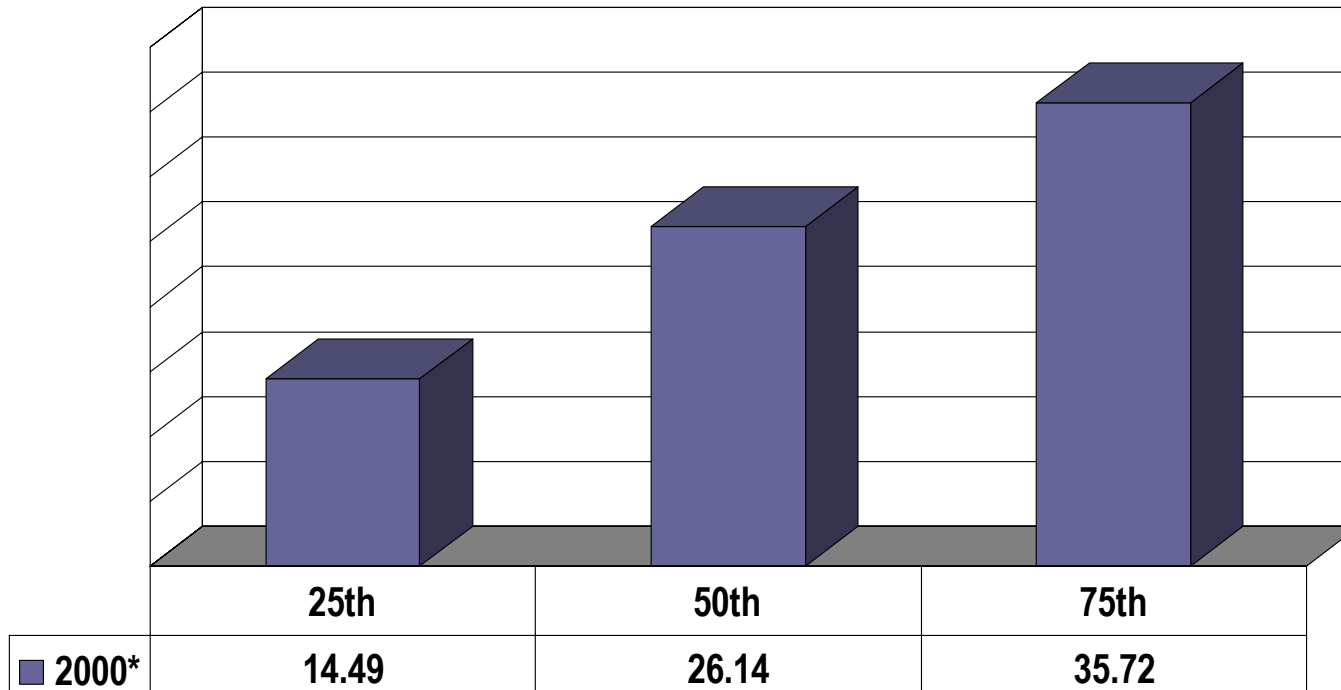
# Number of NUR Residents per 100 ILU Residents

Measures nursing care utilization by contractholders.



# Number of Health Care Residents per 100 ILU Residents

Measures health care utilization by contractholders.

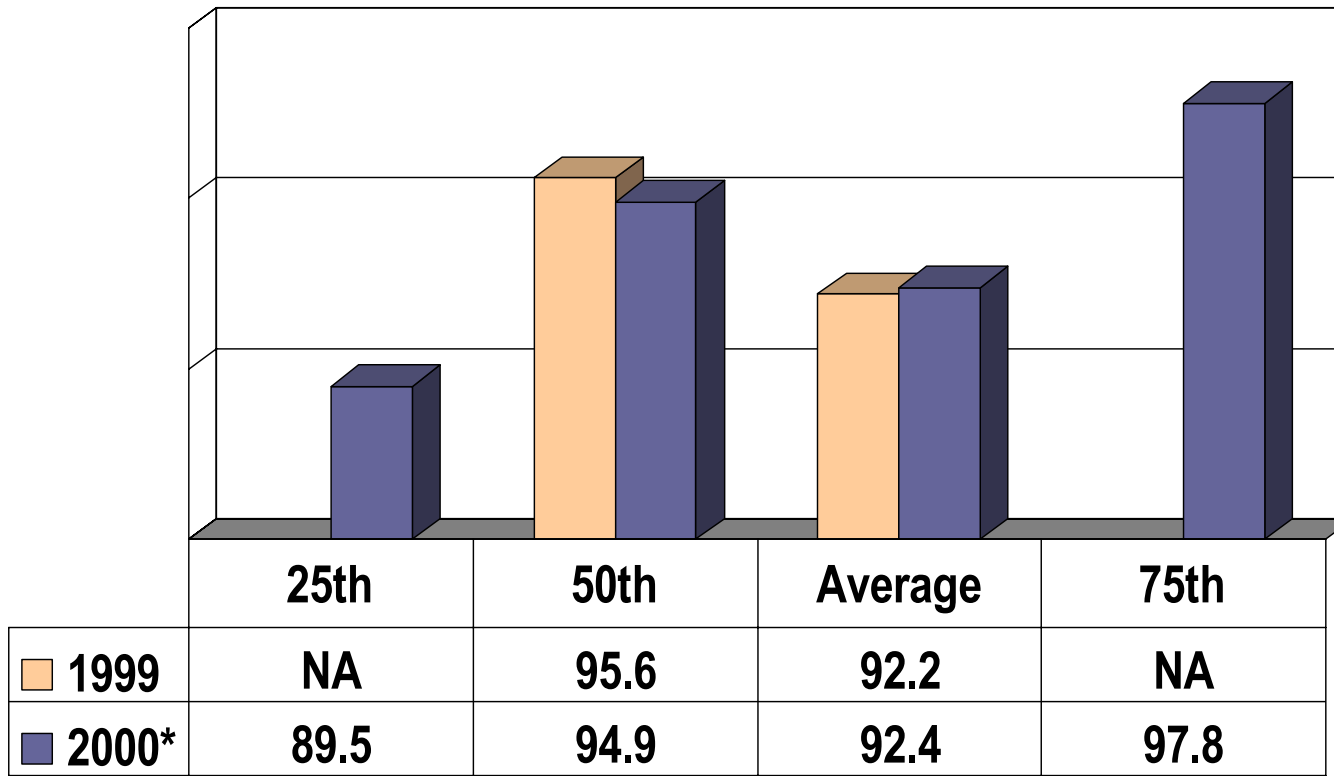


# Financial Statistics



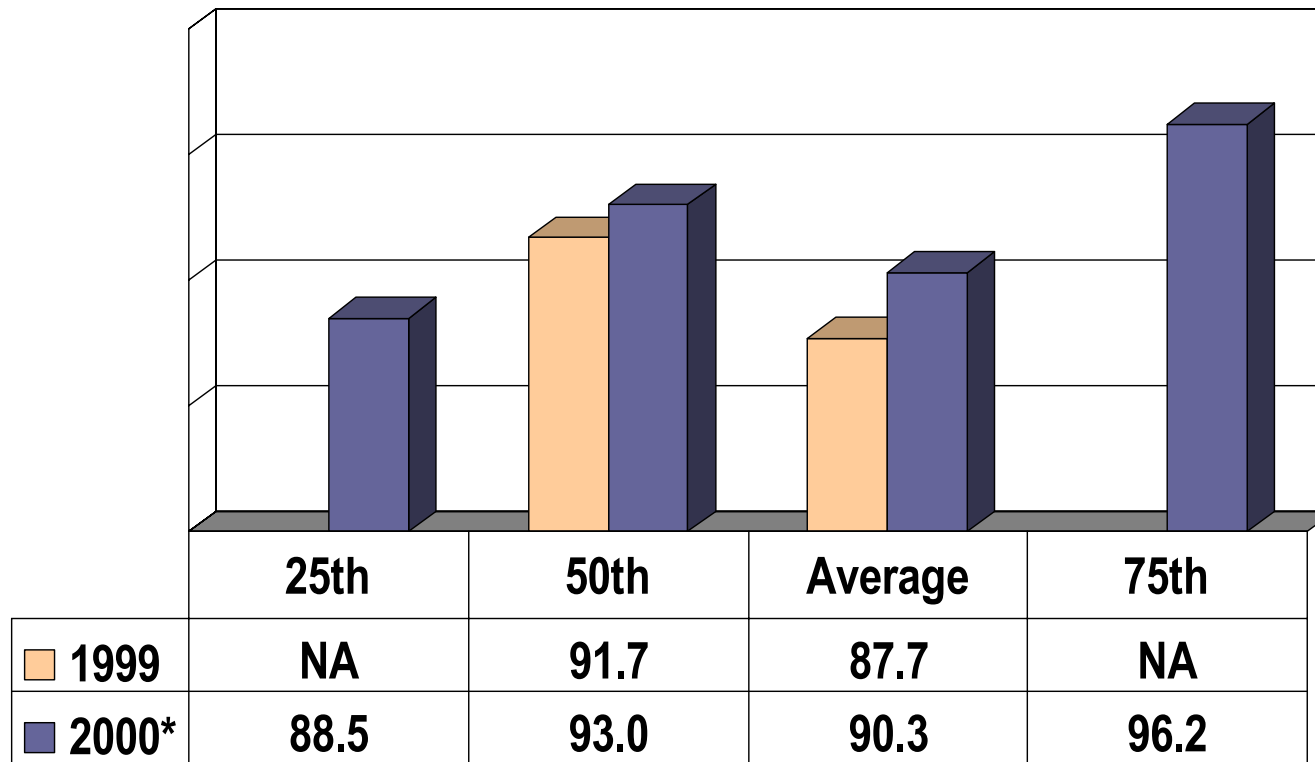
- ◆ Average Occupancy
- ◆ Per Capita Expense Per Day

# Average ILU Occupancy



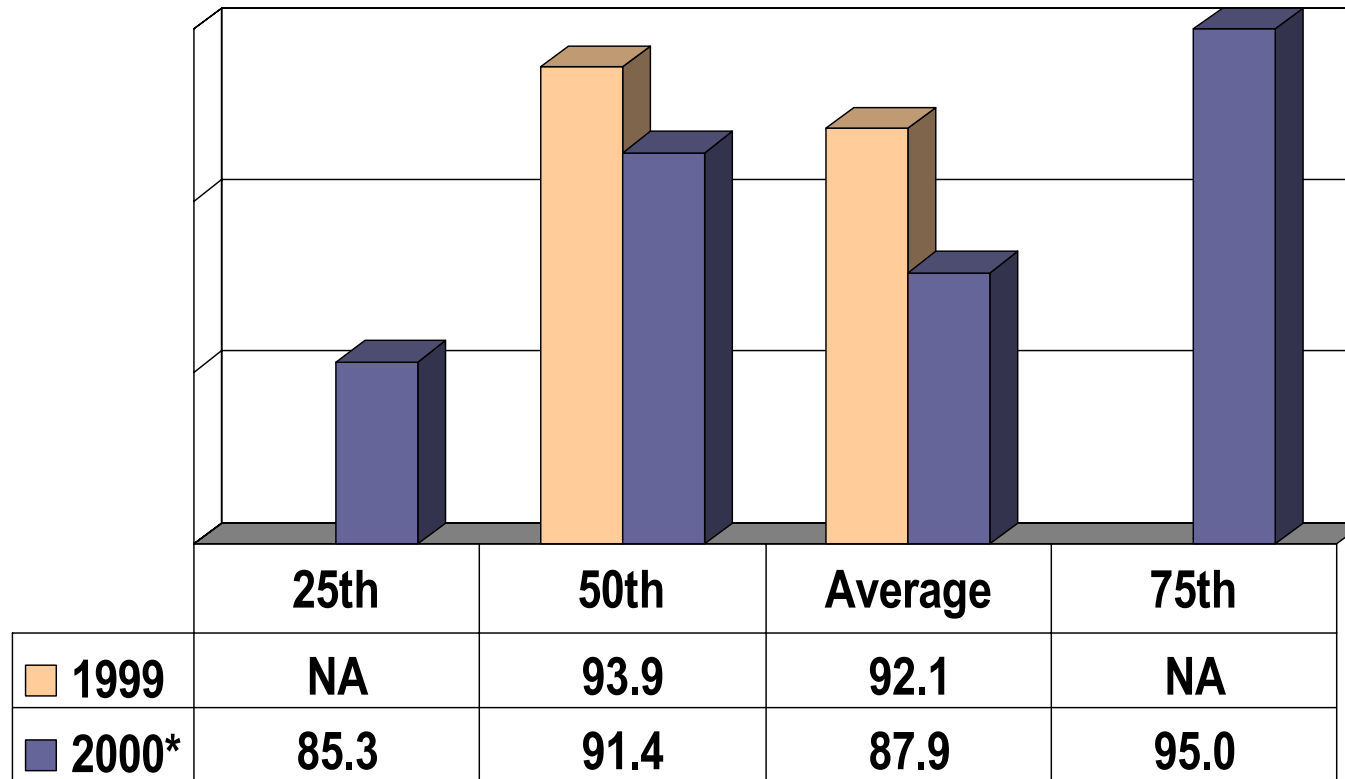
Percentages

# Average ALU Occupancy



Percentages

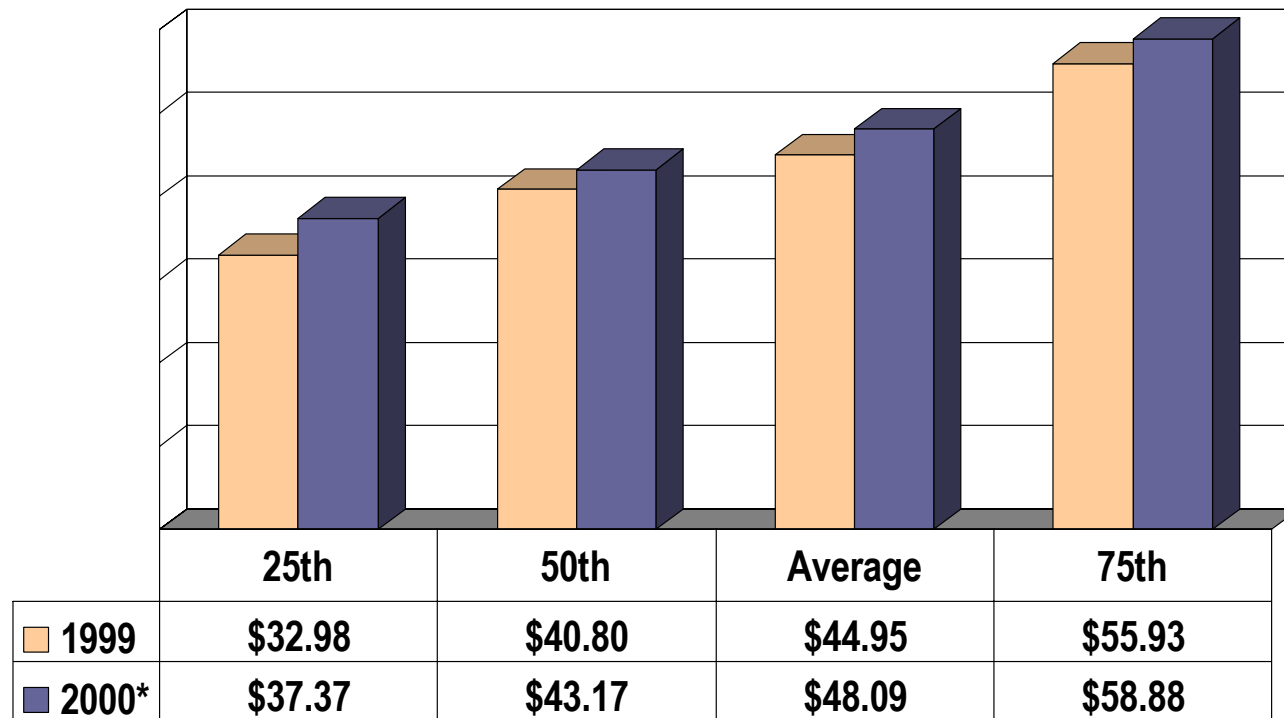
# Average NUR Occupancy



Percentages

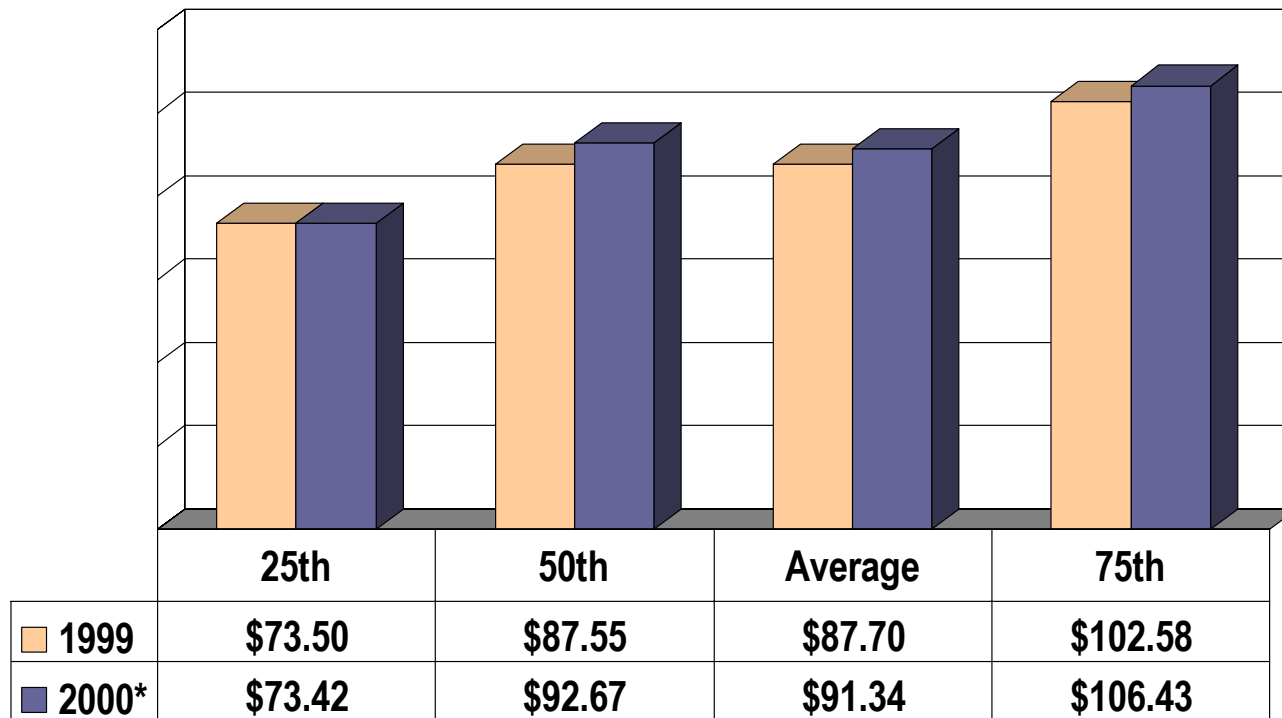
# Per Capita ILU Expense Per Day

Reflects gross operating expenses per day by level of care.



# Per Capita ALU Expense Per Day

Reflects gross operating expenses per day by level of care.



# Per Capita NUR Expense Per Day

Reflects gross operating expenses per day by level of care.

